1. Classify each of the following as a mixture or a pure substance
   a. Water  
   b. Blood  
   c. Ocean  
   d. Iron  
   e. Brass  
   f. Uranium  
   g. Wine  
   h. Citric acid  
   i. Table salt

2. Of the pure substances listed in question #1, which are elements and which are compounds?

3. Classify each of the following as either a heterogeneous or homogeneous mixture
   a. Orange juice (freshly squeezed)  
   b. Tap water  
   c. Steel  
   d. Air  
   e. Raisin muffin  
   f. Brass  
   g. Dinner salad  
   h. Blood  
   i. Gatorade

4. How are compounds and elements similar? How are they different?

5. “A mixture is the chemical bonding of two or more substances in any proportion.” Is this statement true or false? If it’s false, rewrite it to be true.

6. Which of the following are the same and which are different?
   a. A heterogeneous mixture and a solution  
   b. A substance and a mixture  
   c. A homogeneous mixture and a solution

7. Describe how homogeneous mixture differs from a heterogeneous mixture.

8. Name the elements contained in the following compounds (look them up if you need to)
   a. Sodium chloride  
   b. Ammonia  
   c. Ethanol  
   d. Calcium carbonate

9. Match each description below with the following microscopic pictures. More than one picture may get each description. A picture may be used more than once or not at all.

   a. A compound
   b. A mixture of two elements
   c. A single element
   d. A mixture of an element and a compound
10. If a piece of hard, white blackboard chalk is heated strongly in a flame, the mass of the piece of chalk will decrease, and eventually the chalk will crumble into a fine white dust. Does this change suggest that the chalk is composed of an element or a compound?

11. Label each of the following a heterogeneous mixture, homogeneous mixture, or compound.

12. Which of the following diagrams represent elements and which represent compounds? Each color sphere (or truncated sphere) represents an atom.

13. Give the names of the elements represented by the following chemical symbols:
   a. Li  
   b. F  
   c. P  
   d. Cu  
   e. As  
   f. Zn  
   g. Cl  
   h. Pt  
   i. Mg

14. Give the chemical symbols for the following elements:
   a. Cesium  
   b. Germanium  
   c. Gallium  
   d. Strontium  
   e. Uranium  
   f. Selenium  
   g. Neon  
   h. Cadmium  
   i. Nickel